

IN THE SPECIFICATION:

Please amend paragraph [0024] as follows:

[0024] Referring to drawing FIG. 2, the wafer 10 is mounted in a substantially flat alignment (horizontal, perpendicular alignment) prior to the local dispersion of a wet etching agent to remove residue 13. The wet etching agent may comprise well known etching agents, such as liquid, liquid vapor, gases, etc., examples of such including ammonia, hydrogen fluoride, nitric acid, hydrogen peroxide, ammonium fluoride, etc. The etchant may be heated, if desired, by any suitable source, such as ultrasonic energy, laser heating, etc. The wafer surface overlying layer 11 must be positioned in relation to apparatus 21 such that lower thin annular edge 22, an annular type knife edge of the apparatus 21, is positioned adjacent layer 11, but not in contact with layer 11, to provide a “virtual” seal or vacuum therewith. An etching agent is introduced through a tubular member 52, a needle-like member of etchant-dispensing apparatus 21 (also referred to as “etching apparatus” or “cleaning apparatus” 21) onto the alignment marks 12 on the wafer 10 to remove the residue 13. Since the alignment mark 12 is a few hundred microns in size and little unused area exists on the wafer 10 surrounding the mark 12, the constraints regarding the size and use of the ~~etching apparatus~~ apparatus 21 are severe in order to ensure that any semiconductor circuit components in the electronic circuitry located on the ~~wafer~~ wafer 10 surrounding an alignment mark 12 are protected from the etching process. The etching apparatus 21 is an enclosed apparatus with the thin annular edge 22 thereof creating a “virtual” seal or vacuum with the underlying glass (BPSG) layer 11 by a suction being applied through annular space 56 formed between the interior annular wall of annular member 54 and the exterior wall of tubular member 52 of the etching apparatus 21. Sufficient suction is applied in the annular space 56 so that the pressure of the existing atmosphere surrounding the exterior of the thin annular edge 22 is greater than the pressure in the annular space 56 with the existing atmosphere surrounding the thin annular edge 22 being drawn into the annular space 56 between the tubular member 52 and annular member 54, thereby preventing any leakage of etchant from the annular space 56. The thin annular edge 22 of the etching apparatus 21 does not contact the surface of the layer 11, thereby preventing any damage thereto. The surrounding atmosphere of

the annular member 54 flows into the gap formed between the lower edge of thin annular edge 22 and the surface of layer 11 (illustrated by the arrows entering into annular space 56 in drawing FIG. 2) creating the “virtual” seal or vacuum between the etching apparatus 21 and the layer 11, thereby preventing any etchant material being used from flowing from the annular space 56 onto the surrounding area of layer 11 of the exterior to annular member 54. The thin annular edge 22 is located as close as possible to the surface of the layer 11 on the wafer 10 without being in contact therewith.

Please amend paragraph [0030] as follows:

[0030] Referring to drawing FIG. 4, the cleaning head 50 of the cleaning apparatus 21 previously described herein is shown. The cleaning head 50 comprises a cylindrical body 51 having an elongated annular member 54 on the end of the stem 62 thereof, having in turn, thin annular edge 22 located thereon for engaging the surface of the wafer 10 and tubular member 52 located therein for supplying the etching products to the alignment mark 12 of the wafer 10. The cylindrical body 51 comprises a generally cylindrical head 60 and a generally cylindrical stem 62 having elongated annular member 54 thereon. Cylindrical head 60 includes a plurality of bores 64 therein, each bore 64 having threaded aperture 66 thereon for connection to a supply line (not shown), through which etching products are supplied during the etching process, one or more bores 68, each bore 68 having an intersecting blind bore 70 connecting therewith which is connected to a suitable source of suction or vacuum, through which etching by-products are suctioned or vacuumed from the alignment marks 12 on the wafer 10 during the etching of material therefrom and a bore 72 which intersects with bores 64 and within which is contained tubular member 52 which, in turn, supplies etching products to the alignment mark 12 of the wafer 10 during the etching of material therefrom. The stem 62 of the cleaning head 50 includes the lower end 74 of bore 68 extending from cylindrical head 60, bore 76, the wall of which forms annular space 56 with respect to the exterior wall of tubular member 52, and elongated annular member 54 on the end thereof having thin annular edge 22 or 22' thereon which is located adjacent, but not in contact with, the surface of the wafer 10 or any layer 11 on the wafer 10

which has the alignment marks 12 thereon having material removed therefrom, in turn, during etching. As shown, the tubular member 52 extends throughout the bore 76 forming the annular space 56 for the removal of etching products using a suction or vacuum source during the etching of the alignment marks 12 of the wafer 10. The cleaning head 50 may be made of any suitable material, may be formed of any desired number of pieces for the convenience of assembly, cleaning, or replacement thereof, and may be formed in any desired geometric shape. The tubular member 52 typically comprises hypodermic needle stock tubing, such as a 24 gage, i.e., ~~0.022-inches-~~inch in external diameter, standard hypodermic needle stock tubing, although any suitable tubing may be used, such as Teflon™ tubing, glass tubing, polymeric tubing, etc. Furthermore, the tubular member 52 may have any desired geometric cross-sectional shape, such as cylindrical, hexagonal, square, octagonal, ellipsoid, etc.